



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re: Patent Application of Ashok Shukla, Mukta Shukla and  
Amita Shukla

Serial No. 09/591.009  
Filing Date: 06/09/00

Art Unit: 1723  
Examiner: Therkorn, E.

Title: INCISION-BASED FILTRATION/SEPARATION PIPETTE TIP

Honorable Commissioner of Patents and Trademarks  
Box 8  
Washington, DC 20231

Date 12/17/02

APPEAL BRIEF

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TC 1700

(1) Real party interest.

The real party interest consists of the inventors  
named above.

(2) Related appeals and interferences.

An appeal was filed on 10/17/2002 for the application  
no. 09/591,009, filing date 06/09/00. Group at 1723,  
Examiner: E. Therkorn.

Legal representative: not applicable (since the  
inventors are representing themselves)

Assignee: not applicable

(3) Status of claims.

Pending claims: 1, 2, 4, 5, 7-11, 13-16 and 20.  
Claim appealed: 1, 2, 4, 5, 7-11, 13-16 and 20.

(4) Status of amendments.

After the final rejection, Amendments were submitted  
to Ms. Wanda L. Walker, SPE on 09/18/02, subsequent to  
a telephone conversation with Ms. Walker, which she

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recorded as an interview. In the Amendments, we made changes to claim 1, as suggested by her.

In an Advisory Action dated 09/23/02, Mr. Therkorn rejected all of the amendments based on 2.(a), (b) and (c) in the Advisory Action. Yet, the grounds for rejection are unfounded since no new issues were raised and no new matter was added. Therkorn also advised that, for purposes of Appeal, the proposed amendments would not be entered.

**(5) Summary of invention.**

This invention relates to a pipette tip designed to perform filtration or sample separation on the basis of one or more perforations, holes or incisions performed on the tip. Such perforations, holes or incisions are large enough to permit the passage of fluids or smaller particles, but small enough to block the passage of solid materials or larger particles, such as those comprising chromatography media. Such a pipette tip can thus be used for the filtration or separation of samples without the use of a filter, secondary solid matrix or any other components needed to hold chromatography media and other solid matrices within the pipette tip during the separation process. The device described herein can be used for sample separation or purification using a vacuum, pressure, centrifugation, gravitation or other separation methods. The desired sample, containing bio-molecules such as DNA, proteins or other molecular components, is passed through the perforations, cuts or slits in said device during the separation process.

**(6) Issues**

The following issues are presented for review:

- (a) In the final rejection of claims 1, 2, 4, 5, 7-11, 13-16 Mr. Therkorn's basis for rejection was 35 USC 102(E) as anticipated by Valaskovic (US Patent No. 6,190,559) or as obvious under 35 USC 103(a). As described in the Argument section, we assert that the present invention is significantly different from the Valaskovic invention and neither anticipated nor obvious.

- (b) In the advisory action in response to our Sept. 18, 2002 correspondence, Mr. Therkorn said that the proposed amendments "raise new issues that would require further consideration and search" and "raise the issue of new matter." As described in the argument section, the issues we presented were part of our original patent application, are directly related to the amended claims and raise neither new issues nor new matter.

Further Issues:

Below, we have outlined additional problems and frustrations we have faced in dealing with the examiner, Mr. Therkorn, who was unprofessional and uncooperative throughout the process.

He did not make any recommendations as to how the claims could be amended based on his rejections and he failed to understand the appeal we made in the amendments. Although we spoke to Ms. Wanda Walker, she was unable to help since Mr. Therkorn is a senior patent examiner with over 22 years of experience. He can, thus, independently make decisions and there was no one else at the patent office that could have sat in on an interview.

As we faced these frustrations, we approached Mary Lee about this case and she suggested that we file a brief, as we have done herein.

The major issues and sequence of events with regard to this application are presented below:

On Jan. 4, 2002. we received an Office Action for the above application. I called the examiner, Mr. Therkorn, to obtain an interview and he said that he would call me back with a date and time.

Since we did not hear back from him, I called him again after about 10 days. At that time, Mr. Therkorn gave us an appointment on Jan. 24, 2002 at 10 a.m. and he specified that the appointment would be for only 30 minutes. We have had several interviews with different examiners but no others have demonstrated such attitude.

On Jan. 24. 2002, my wife Mukta Shukla (co-inventor) and I went for the interview with Mr. Therkorn's office he offered us only one chair. So, while I gave the chair to my wife, I sat on the floor and proceeded to demonstrate the invention to Mr. Therkorn.

Throughout the meeting he was discourteous and took no interest in our discussion and description of the invention. Afterward, he cited US Patent 6,190,559. We tried to explain to him that the invention described by that patent was substantially different from ours, but Mr. Therkorn took no interest in our explanation. We tried to ask him for his opinions and his explanation of the other patent but he repeatedly replied, "I don't know." Although we said we were ready to amend our claims, he offered no comments as to the differences between our invention and that of the other patent he continued to cite.

Toward the end of the meeting, we asked him if anyone else could help us or if we could have a meeting to explain the invention to another USPTO officer. Mr. Therkorn responded by saying that he works independently and subsequently said that the 30 minutes were over and the interview needed to be concluded.

After the Jan. 24, 2002 meeting, we responded to Mr. Therkorn in writing. He continued with his same arguments in his final rejection on April 18, 2002.

Frustrated with the proceedings of this patent, I called Wanda Walker on July 8, 2002 for her help since she is a SPE in this Art Group. She said that she would talk to Mr. Therkorn. As described above, our subsequent amendments were rejected again. However, we are ready to also provide affidavits from scientists and other experts who can attest that our invention is significantly different from that cited by Mr. Therkorn.

On 9/16/02, I called the director's office of 1700. They called Ms. Wanda Walker and she called us. On 9/18/02 we talked to Ms. Walker for over an hour. During that conversation she agreed that since the description of the patent includes the fact that the particles are larger than the perforations or slit, this would not be considered new matter.

That was the last day of two month of time extension I faxed it with credit card payment to buy extra time on 9/18/02.

We had further correspondence and communication with Ms. Walker and Mr. Therkorn, as described, but, at this point, we are really confused about whom to contact and how to proceed on this application. We have two more applications with him and we are afraid to talk to him about the other applications as he may reject them as his attitude is showing in the reply.

Therefore we request this application should be reconsidered. If some changes are required we are ready to do as we are ready to do from the beginning, however there was lack of cooperation from the examiner.

**(7) Grouping the claims.**

Claim 1 is the only claim being contested since all the other claims are dependent on claim 1.

**(8) Argument.**

The following arguments point to the errors we see in the rejection of our claims by Mr. Therkorn.

- (1) In the final rejection of claims 1, 2, 4, 5, 7-11, 13-16 Mr. Therkorn's basis for rejection was 35 USC 102(E) as anticipated by Valaskovic (US Patent No. 6,190,559) or as obvious under 35 USC 103(a). As described in the Argument section, we assert that the present invention is significantly different from the Valaskovic invention and neither anticipated nor obvious.

Our device is clearly different from that of Valaskovic since we take a column or tube with one closed end and fill it with chromatographic particles. Then we make a very small slit at the closed end such that the width of the slit is smaller than the size of chromatographic particles so that the material is not lost during sample preparation and the solution can flow freely through the pipette tip.

- (2) In the advisory action in response to our Sept. 18, 2002 correspondence, Mr. Therkorn said that the proposed amendments "raise new issues that would require further consideration and search" and "raise

the issue of new matter." As described in the argument section, we issues we presented were part of our original patent application, are directly related to the amended claims and raise neither new issues nor new matter.

Examiner has rejected our request for the amendment and suggested that adding in claim 1 **" said chromatographic particles are larger than the perforation" "is raising new issues requiring further search and consideration"**. However, in our device "pipette tip" the chromatographic particles are larger than the slit, which we stated:

1. In our original application page 4 line 15-18, we indicated that "The perforations, holes or incisions are of such dimensions that fluids and smaller particles can pass through them **while larger particles are retained in said pipette tip.**"

2. In our original application claim 1. "The perforations, holes or incisions are of such dimensions that fluids and smaller particles can pass through them **while larger particles are retained in said pipette tip.**"

3. During our interview on Jan. 24, 2002, we demonstrated that the particles are larger than the slit, so that they can retain in the tip during the sample prep.

4. In correspondences, which we sent on April 4, 2002 and July 18, 2002 and September 18, 2002, we tried to explain this issue each time because the particles are larger than the slit, therefore, they can stay in the pipette tip during the sample prep.

Considering the above facts, we request that the above information should not be considered as new matter and we request rejection should be withdrawn.

(9) **Appendix**

**WHAT IS CLAIMED IS**

1. A pipette tip for sample preparation, which contains chromatography particles and has an open upper end and a closed lower end and has one or more perforations at the said lower end to permit the passage of fluids through said perforations while retaining chromatographic particles in the said pipette tip, said chromatographic particles are larger than the said perforations.

2. A pipette tip, as in claim 1, wherein said pipette tip is a holding unit is selected from the group consisting of a tube, a housing, a column, and a vial.

4. A pipette tip, as in claim 1, wherein multiple units of said pipette tip are joined together.

7. A pipette tip, as in claim 1, wherein said pipette tip is made of materials selected from the group consisting of polytetrafluoroethylene, polysulfone, polyethersulfone, polypropylene, polyethylene, fluoropolymers, cellulose acetate, polystyrene, polystyrene/acrylonitrile copolymer, PVDF, glass, and combination thereof.

8. A pipette tip as in claim 1, wherein the volume of said pipette tip is between 0.00001 and 100 milliliters.

9. A pipette tip as in claim 1, wherein one or more of said perforations are made at the bottom of or on the lateral sides of said pipette tip.

10. A pipette tip as in claim 1, wherein said perforations include one or more selected from the group

consisting of cracks, slits, cuts, holes, incisions orifices, and combination thereof.

11. A pipette tip as in claims 1, wherein the method to make said perforations is a chemical or physical method selected from the group consisting of cutting with a knife, blade, or laser beam, applying heat or pressure, using chemical reactions, and combination thereof.

13. A pipette tip as in claim 1, wherein said pipette tip contains a chromatographic or separation material which can be in a form from the group consisting of particle, powder, sheet, woven, non-woven, and combination thereof.

14. A pipette tip as in claim 1, wherein said chromatographic particles is selected from the group consisting of one type of material, a mixture of different sizes of particles, different types of materials, and combination thereof.

15. A pipette tip as in claim 1, wherein said chromatography particles is selected from the group consisting of chromatographic silica, polystyrene, carbon, polymers, media, gels, solid powders, media used for the purposes of sample filtration, separation or purification.

16. A pipette tip as in claim 1, wherein said chromatography particles can be chemically or physically modified to alter the nature of the separation process.



20. A pipette tip as in claim 1 wherein said pipette tip is combined with a piston designed to pull the sample into said pipette tip or push said sample out of said pipette tip.

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